

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Patent Application No. 10/631,804

REMARKS

Claims 1-4, 6-13 and 15-24 are pending in the application. By way of this Amendment, Applicant has canceled claims 1-8, 11-13 and 15-17 leaving independent claims 19 and 24 and dependent claims 10, 18 and 19-23 pending in the application. In addition, Applicant has amended independent claims 9 and 24. For the following reasons, the prior art rejections of these claims are respectfully traversed. More specifically, it is submitted that the pending claims patentably distinguish over Walz and Roh et al.

According to Applicant's understanding, the Examiner is construing the term "below" in claims 9 and 24 as a term of relative height with regard to the position of elements 316 and 322 being below the IC. However, these claims describe that the heat-radiating mechanism comprising plural heat sinks is disposed between the IC and the substrate. Elements 316 and 322 of Walz are not between the IC and the substrate. In order to better distinguish the claimed invention over the art, claims 9 and 24 have been amended to recite "directly below". In addition, the claims have been amended to recite "plural laterally adjacent heat sinks."

Roh discloses a semiconductor chip 10 mounted on a chip mounting portion 34. The portion 34 is connected by heat-dissipating via holes 41 and 42 which perforate a board body 21 of PC board 20 to a lower heat dissipating layer 37.

The PC board also includes a power layer 31 and a ground layer 32, and upper wiring layer 30.

The Examiner cites upper wiring layer 30 as the heat radiating mechanism that is mounted on the substrate, disposed between the IC chip and the substrate. However,

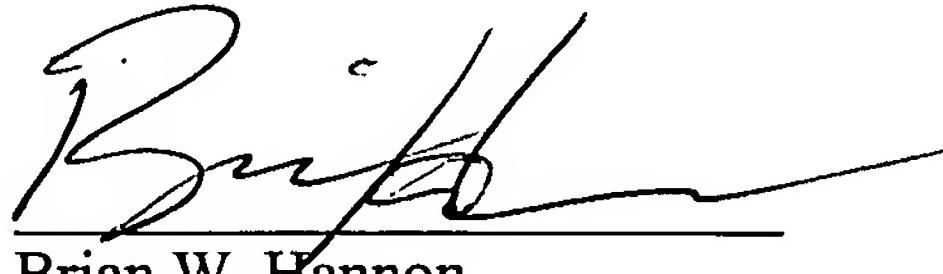
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independent claims 9 and 14 recite that the terminal of the IC chip and the heat radiating mechanism are electrically connected. In comparison, in Roh, there are no electrical connections between the chip 10 and the chip mounting portion 34 which is between the chip 10 and the PC board 20. Whereas upper wiring layer 30 and chip mounting portion 34 might be formed from a common layer, they are separate structures of the finished PC board. Accordingly, the chip mounting portion 34 does not anticipate a heat radiating mechanism disposed between the IC chip and the substrate, and electrically connected to terminals of the IC chip.

In view of the foregoing, it is respectfully submitted that the claims patentably distinguish over the cited art. It is therefore requested that the application be passed to issue at the earliest convenience.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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